

INDIAN SOCIETY FOR ATHEROSCLEROSIS RESEARCH NEWS BULLETIN

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Secretariat
Department Of Biochemistry
Lady Hardinge Medical college
New Delhi-110001

e-mail: drritusingh19@gmail.com, drritusingh@rediffmail.com website: www.isar.co.in



INDIAN SOCIETY FOR ATHEROSCLEROSIS RESEARCH EXECUTIVE COUNCIL 2008-2009

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Presidents Message

It has been my privilege to serve the Indian Society for Atherosclerosis Research in different capacity ever since its inception, contributing to its growth. We are at an important stage in our development as a professional society and need the continued involvement of everyone interested in atherosclerosis research. May I have your attention to a few important points indicated below.

Since its formation, the ISAR has been promoting atherosclerosis research in numerous ways through organization of symposia, conferences, workshops, publication of proceedings and newsletter.

The website has been launched. To encourage youngsters, we have instituted awards for research work both in basic research and clinical research in atherosclerosis. We have instituted Endowement Awards in honour of the founder members of our society. Besides continuing these activities, we have to expand our activities and take up new initiatives. While many of the present activities have been organized on a voluntary basis by our esteemed members, a stable basis of funding is needed to support our society. Only through liberal support from our members and by increasing the strength of the society and attracting potential sponsors, we can sustain the present level of activities and take up new initiatives such as publication of a Journal, campaign for risk reduction and reduction of disease burden.

Another important point relates to our commitment to promote atherosclerosis research. A number of laboratories and research groups focus on basic research. There are a number of publications from various centres on the efficacy of several naturally occurring substances and neutraceuticals with antioxidant, anti-inflammatory, hypolipidemic and antithrombotic properties; there are reports on the regression of experimental lesions by such substances. Active clinical research is underway in a number of centres. Better integration of basic research with clinical research is required. It is time that we commit ourselves to promote translational atherosclerosis research whereby the concepts developed and discoveris made at the 'bench' are applied to the 'bed' side. As President of ISAR,I will work to ensure that the ISAR conferences, professional development programmes and advocacy initiatives demonstrate this commitment.

Prof P.R.Sudhakaran President ISAR



Secretary's Message

Dear Members Greetings from Delhi As I end my tenure as Secretary, ISAR, I wish to present the Highlights of last two years in office

- 1. <u>Membership Directory</u> : updated December 2008, printed, posted and made available to all on the website also. The next e-updation (on the website only) will be done in December 2009 before I leave office.
- 2. <u>New Members</u>: In the past two years, we have been on a membership drive and are fortunate to have about **40 new members** with us. We welcome them all.
- 3. <u>The newsletters of 2008 and 2009</u> have been sent to all; those who have any receipt problems may download it from the website (conference icon)
- 4. The Oration awards and Balaji Endowment Award in ISAR conferences have received enthusiastic response.
- 5. IAS Fellowship : The Boston Conference (IAS 2009) and Asia-Pacific Grants were equally enthusiastically applied for and it is heartening to note that one of our members was awarded a IAS Fellowship
- 6. The website www.isar.co.in has proved to be an effective tool of communication.
- 7. <u>Updates of ISAR activities are regularly updated on IAS website (www.athero.org)</u> by the secretariat who is in constant communication with the international body.
- 8. Our membership of the International atherosclerosis Society is financially updated till date
- 9. After the grand success of ISARCON 2008, <u>ISARCON 2009 in Mysore</u> is eagerly awaited (The previous venue is now changed to Mysore). Details as available with us are made available in this newsletter
- **10.** The elections are to be held this year at Mysore in Dec 2009. Those who wish to apply may send in their nominations to me before 15th November.2009

ISAR now needs a journal, which I hope the next office will take up.

I wish to thank ALL for their support and involvement .Looking forward to meet the growing ISAR family at Mysore ISARCON 2009.

Dr Ritu Singh Secretary, ISAR



Report of XXIth Annual Conference (ISARCON 2008)

The 21 st Annual Conference of the Indian Society of Atherosclerosis Research was organized by the Dept. of Biochemistry & Biotechnology, Annamalai University, Annamalainagar, Tamil Nadu, India dec 7th-10th 2008 under the able chairmanship of Dr Venugopal Menon

It was a extremely successful conference and a large number of internationally renowned scientists traveled across the Globe to be a part of this accademic feast. P.A.Kurup Oration was conferred to Dr.K.T. Augusti .,Retd Professor of Biochemistry, Kerala University

After the impressive inauguration on 7th Dec 2008, the accademic deliberations started with the plenary lecture on 8th dec by renowned international scientist Dr. Kailash Prasad from Canada where he highlighted the role of Flaxseed and its components in the treatment of atherosclerosis. Symposium Session I was chaired by Dr. Kailash Prasad (Canada) &Dr.NarasimhamParinandi(USA) where Dr. Nilanjana Maulik (USA) gave a lecture on Rescue of diabetes and related impairment of myocardial angiogenesis. The second lecture by Dr.C.C. Kartha raised a question that can MCP-1 be a target to reduce the risk for atherosclerosis in type-2 diabetes mellitus? . DrDipak K Das highlighted the effect of tocotrienols on the h y p e r c h o l e s t e r o l e m i c r a b b i t h e a r t s a n d D r . B e l m a T u r a n of Turkey showed the roles of oxidant stress and matrix metalloproteinase in endothelium-dependent relaxation of diabetic rat aorta.

Dr. P.R. Sudhakaran gave molecular insights into Mo-Mq foam cell formation which was followed by an interesting lecture on Phytomedicine for diabetes: "Time tested or time to test" by Dr. M. Balasubramanyam from Chennai. The third session of symposium chaired by Dr. Nilanjana Maulik (USA) & Dr. P.R. Padma (Coimbatore) started with a note on Vasa vasorum imaging using MRI and contrast ultrasound by Dr. R. Ravi kumar of Chennai. Dr. John E Baker (USA) delivered a talk about the origin and treatment of total body irradiation accelerating the onset of coronary sclerosis. In the same session Dr. Raj Ajit Srivastava presented a talk on hamster as an animal model to test compounds for the treatment of metabolic syndrome and atherosclerosis followed by Dr. Govindasamy Ilangovan's (USA) Heat shock proteins in the pathogenesis of atherosclerosis.

Dr. Narasimham Parinandi (USA) presented intresting insights on the signaling lipidemics of phospholipases and lipid oxygenases in vascular endothelium-while dealing with the split personalities of redox-active antioxidant. The last symposia was chaired by Dr.G. Subramanayam (Tirupati) & Dr. Belma Turan (Turkey) and Dr. R. Umarani presented a study on Carotid intima media thickness and its risk factors. Dr. Kuppusamy Periannan (USA) was invited for a talk on PTENuation of restenosis by a synthetic curcuminoid.

On 9th December the day started with the plenary lecture of Dr. Naranjan S. Dhalla (Canada) about the role of platelet activation in the development of atherosclerosis. Dr. V.Mallika continued the session with the interrelation between lipoprotein (a) and homocysteine in atherosclerosis. Dr. S.R. Gupta gave updated insights about coronary

artery disease in young and Dr. Stanley M. Prince told about cardioprotective effect of (-) epicatechin in isoproterenol-induced myocardial infarcted rats. The session ended with the talk on fusion peptides as gene delivery agents by Dr. Rukkumani Rajagopalan.



The next session started with a interesting lecture on cardiovascular benefit from antioxidants given by Dr. Sampath Parthasarathy (USA). Dr. Sashwati Roy(USA) told the role of apoptotic cell clearance in resolution of inflammation then Dr. N.Chidambaram asked the question Should Lp (a) be measured in Asian Indians? Dr. Rama Gopalan described some ageing changes in the cardiovascular system. The others symposium session of the day was continued by Dr. Saswati Roy (USA). It started with a brief review on bioactivity and structure correlations of curcumin, its derivatives and analogs given by Dr.K.N. Rajasehkaran then the session continued with PPAR- \square and GLUT-2 gene expression in hyperlipidemic rats with/without diabetes lecture given by Dr.K.V. Pugalendi.

Dr. Hari Shankar Sharma (Netherlands) shared his experience on how NO donors augment vascular endothelial growth factor expression during chronic airway inflammation. Dr. Cletus J.M DSouza highlighted some of the modification of HDL-associated enzymes and their implication in cardiovascular disease. The upcoming role of vitamins was discussed by Dr. Chandan K Sen (USA) in his lecture on Tocotrienols: vitamin E beyond tocopherols. Dr. B.S. Viswanath described plant latex proteases and their involvement in blood coagulation and wound healing.

On 10th December the sessions were in the Centre for advance study in Marine Biology (CAS) at Parangipettai. There were parallel sessions in morning and afternoon. Chairpersons for one of the morning session were Dr. Hari Shankar Sharma (Netherlands) & Dr. T.J. Pandian this started with faith and facts of phytotherapy for obesity by Dr. M.A. Akbarshah then Dr. Shiva K.P. Shivakumaran (Australia) described Seaweeds as a potential source of pharmaceuticals. Dr. Surekha Zingde discussed Proteomics and cancer and Dr. K. Srikumar described that a phyto-oxy sterols is a natural anthihyperglycemicfactor. The other morning session was chaired by Dr. T. Balasubramanyam & Dr. Lindsay Brown (Australia). In this session, Dr. Jayadeep showed natural antioxidants of in vivo biotransformed rice then Balasubramanyam described isolation and partial characterization of collagen from outer skin waste of Squid Loligo uyii .Dr. V. Sampath discussed potential for bioactive substances from marine organisms, with reference to potential drugs for treating human diseases. The oceans and human health: drugs from the deep was the lecture given by Dr. K. Venkateshvaran .Dr. Kemparaju discussed that NN-PF3-is a fibri(NOGE)nolytic and antithrombotic factor from Indian cobra venom Dr. A. Ganapathy described the effects of Safflower (Carthamus tinctorius L.) seed extract on osteoblast activities of rats. In the end there was an oral presentation session for which the chairpersons were Dr. Shiva K.P. Shivakumaran (Australia) & Dr. V.Sampath .The first presentation was an update on HIV drug development given by Dr. M. Elanchezhiyan and in the other Dr. M. Arumugam showed isolation of heparin from fish waste (Istiophorus platypterus)

This was followed by the Validectory Function and Award Presentation Dr Viji Vijayan received the Balaji Endowment Award for her research work on Modulation of inflammatory mediators by Bacopa monniera (L.) Wettst. on experimentally induced arthritis. Due to the level of research presented and the enthusiastic participation of doctors and scientists from India and abroad , the ISARCON 2008 was extremely successful and academically fruitful.



Report on the Council meeting of office bearers, International Society of Atherosclerosis, 2009

The Council meeting of the constituent societies of the International Atherosclerosis Society was held at the John B.Hynes Convention centre, Boston, Massachusetts on Tuesday June 16, 2009 from 11.00 am $\tilde{A}\phi \in$ 2 pm.

Dr Jean Charles Fruchart, President of the IAS welcomed the gathering and presented a review of the IAS activities. New officers to the IAS were elected after an open ballot by all the members present at the meeting. Dr. Phil Baxter from Australia was elected as President Elect and Lale Tokgozoglu was elected as Secetary. The Regional Federation Activities were presented by respective members: Dr Jean Davignon, Dr Yuji Matsuzawa and Lale Tokgozoglu presented the federation activities of America, Asia Pacific and Europe respectively.

After a working lunch the bids for the 2015 ISA were presented, Valery Kukarchuk presented for Russia and John Kastelein for Netherlands. The bids were to be finalized and final announcements were to be made after the council meeting.

The update on ISA 2012 was presented by Phil Baxter he invited the members to attend the meeting in large numbers at Sydney, Australia, March 2012

The Bylaws changes were reviewed by Jean- Charles Fruhart. New member societies to join IAS are: Chilean Atherosclerosis working group (Chile), Finnish Atherosclerosis Society (Finland), Russian National Atherosclerosis Society (Russia) and Ukrainian Atherosclerosis Society (Ukraine).

Later the activities of the various member societies were presented by the representatives attending the meeting. As a President Elect of the Indian Society for Atherosclerosis Research, I represented our society and presented its activities and highlighted the e-news letter being brought out, the life members, the annual meeting and the general influence of Indian contemporary medicine in the treatment of atherosclerosis.

The meeting ended with vote of thanks to the outgoing office bearers and welcome to the new office bearers.

The points discussed at this meeting were referred to the General assembly which was scheduled for Wednesday, June 17th 2009

Dr Rama Gopalan President Elect ISAR (2010-2011)



Antihyperlipidemic potential of piperine an alkaloid found in black pepper (Piper nigum Linn.)

N. Nalini

Department of Biochemistry & Biotechnology, Annamalai University, Annamalainagar 608 002, Tamil Nadu, India

Hyperlipidemia has been implicated in atherosclerosis, which is the leading cause of death and disability in developed countries and its rate is rising rapidly in developing countries, and is forecast to be the most common cause of death globally, including India, by 2020. Abnormal lipid metabolism such as increase in blood cholesterol, triacylglycerol and lipoproteins are considered to be major risk factors in the development of atherosclerosis.

Traditional medicine and medicinal plants have been used in most developing countries and the industrialized societies which has traced the extraction and development of several drugs and chemotherapeutics from these plants as well as from traditionally used natural herbs. Piperine is a pure nutritive food chemical, pungent ingredient (1-9%) and major alkaloidal constituent of black pepper (Piper nigrum Linn.) and long peppers (Piper logum Linn.) which are consumed as dietary spice and is used in the traditional system of medicine.

Male albino Wistar rats were divided into two groups as control diet group and high fat diet group (HFD). Control diet group animals were fed with standard pellet diet whereas HFD group animals were fed with standard pellet mixed with 2% of cholesterol, 0.125% of cholic acid and 20% of coconut oil. Both groups were again divided into four subgroups, each consisted of ten animals each, and were treated for 10 weeks as follows. 1% carboxymethyl cellulose (CMC); 10 mg carbimazole (CM) / kg body weight; 10 mg CM + 40 mg piperine / kg body weight and 10 mg CM + 2 mg atorvastatin (ATV)/kg body weight. Both piperine and atorvastatin were dissolved in 1% CMC freshly everyday according to the individual body weight of the animal.

Piperine supplementation along with HFD to rats lowered the plasma lipids, restored the lipoprotein composition, optimized the free fatty acid composition of plasma and tissues, had a modulatory role on the enzymes involved in lipid homeostasis, improved the antioxidant status, reduced the inflammatory reactions and related glycoprotein changes and also optimized the histopathological alterations. The results of our study reveals the lipid lowering efficacy of piperine, which acts as a potential modulator of cellular lipid homoeostasis and antioxidant status and may as well form the basis for a model to develop an effective antihyperlipidemic drug that possesses antioxidant capacity. Recent years have seen an increased enthusiasm in treating various diseases with natural products, it is expected that piperine may act as a novel drug in the future to control various diseases, including cardiovascular disorders, carcinogenesis and other oxidative stress induced pathological conditions.



EARLY DETECTION OF ATHEROSCLEROSIS

Atherosclerosis remains clinically mute for a long time and frequently manifests itself with an acute cardiovascular event; therefore detection of the disease in subclinical phase and interventions to reduce or reverse its progression is an issue of great relevance.

Non-invasive methods for measurement of endothelial function include ultrasound flow-mediated dilatation (FMD), salbutamol-mediated endothelial function measured by pulse wave analysis (PWA) or pulse contour analysis (PCA), flow-mediated magnetic resonance imaging (MRI), laser Doppler flowmetry, and flow-mediated pulse amplitude tonometry (PAT).. Qaisi MA, Kharbanda RK, Mittal TK, Donald AE. Measurement of endothelial function and its clinical utility for cardiovascular risk. Vasc Health Risk Manag. 2008 June; 4(3): 647652.

C-reactive protein (CRP) exerts biological activity on vascular endothelial cells. Lectin-like oxidized LDL receptor-1 (LOX-1), the oxidized LDL receptor on endothelial cells, is involved in endothelial dysfunction induced by oxidized LDL. CRP and oxidized LDL-receptor LOX-1 directly interact with each other..Fujita Y, Kakino A, Nishimichi N, etal. Oxidized LDL-receptor LOX-1 binds to the C-Reactive Protein and Mediates its Vascular effects. Clin Chem 2009; 55: 285-294.

In early lesions, macrophage apoptosis limits lesion cellularity and suppresses plaque progression. In advanced lesions, macrophages apoptosis promotes the development of the necrotic core. Endoplasmic reticulum (ER) stress pathway and pattern recognition receptors (PRRs) may play a complex and coordinated role in triggering macrophage apoptosis. Seimon T, Tabas I. Mechanisms and consequences of macrophage apoptosis in atherosclerosis. J Lipid Res 2009; 50: 382-387.

Individuals who maintain lifelong low plasma levels of apolipoprotein B lipoproteins have an 90% decreased risk of coronary artery disease. Tabas I, Williams KJ, Boren J. Subendothelial Lipoprotein Retention as the Initiating Process in Atherosclerosis: Update and Therapeutic Implications. Circulation 2007; 116: 1832-1844.

The amount of calcium in the coronary vessels (Calcium scoring), as measured by CT, is of high predictive value for subsequent serious or fatal heart attack and sudden cardiac death in patients, independent of the patient's age, sex and other coronary risk factors. The calcium scoring adds to prognostic value of SPECT (Single photon emission computed tomography) myocardial perfusion imaging. HackerM, Uebleis C, Becker A, etal. Stable Coronary Artery Disease: Prognostic Value of Myocardial Perfusion SPECT in Relation to Coronary Calcium Scoring Long Term Follow-up. "Radiology online (http://radiology.rsnajnls.org/)

Compiled by : Dr Sarika Arora (ISAR LM- 238), Asstt. Professor, Deptt of Biochemistry, Lady Hardinge Medical College and S.S.K.Hospital, N.Delhi



INDIAN SOCIETY FOR ATHEROSCLEROSIS RESEARCH Dept. of Biochemistry, Lady Hardinge Medical College, New Delhi -110001

APPLICATION FORM FOR MEMBERSHIP

1.	Full Name:	Dr. /Mr./Mrs.	Surname	Middle Name			
2. 3. 5. 6. 7.	Office Addre	Academic	Pin	(must be given) Yes/No			
8.		Recommer	nded by				
Date			Signature of the Applicant				
Life membership (LM) Fee Patron / NRI Rs. 5300/- Annual Rs. 100/- Life member Rs. 1300/- Student Rs. 50/- (Please note Rs.300/- has to given every 2 yrs by all life members for membership of international Atherosclerosis society .) Note: 1.) Cheque /DD Payable to Treasurer, ISAR 2.) Add Rs. 50/- for outstation cheque							
Dept Lac Shal Ph:	itu Singh ,M. Secretary , IS t of Biochemis dy Hardinge M heed Bhagat 9 09811173213 011- 2340814	AR stry ledical Colle Singh MarNe		Prof (Dr) J.Gaml Treasure Department of Bioche University College of Shahadara , Delhi - Ph: 0 98-116-41277 0120-2510365	r , ISAR emistry, Medical Sciences		

Jassigambhir @ yahoo.co.in

gambhir@del2.vsnl.net.in

drritusingh19@gmail.com

drritusingh@rediffmail.com



Oration Awards

ORATIONS

Nomination are invited for Dr. P.A. Kurup Oration (basic Research in Atheroscierosis) to be held in the forthcoming annual conference of ISAR.

Scientists who have contributed significantly to atherosclerosis research may be nominated by life members of the society for the oration awards. The scientist nominated must have been a member of ISAR for a continuous minimum period of 5 years. Following information to be sent to the secretary ISAR Dr. Ritu Singh via e-mail before Oct. 31st. 2009

- 1. Biodata of the nominee
- 2. Abstract of oration (about 120 words)
- 3. ISAR membership status of the nominee
- 4. Recommendations from the nominator

Nominee if selected, will be required to provide, in triplicate a full oration manuscript before November 30, 2009 which will be published after the conference. The awards of oration will receive in appreciation of his/her contribution a plaque and a certificate. His/her local hospitality will be borne by ISAR Conference Committee

BEST PAPERS

(AWARDS FOR RESEARCH PAPERS)

Two medals for best papers in the following will be awarded at 22nd ISARCON-2009

- 1. Balaji Endowment Medal = Basic experimental research on atherosclerosis.
- Sri Venkateswara Cardiac Research Medal Clinical research on atherosclerosis and allied aspects.
 Criteria for awards
- 1. The candidate should be a member of the society for at least two years.
- 2. He/she should be first author of the paper.
- 3. The work should have been carried out in India and should be original in content. Basic research work on atherosclerosis will be considered for Balaji Endowment Medal and clinical research work on atherosclerosis and allied aspects will be considered for Sri Venkateswara Cardiac Research Medal 4. The author should indicate whether the paper should be considered for award on basic research or clinical research.
- 4. The awardee should be 35 years of age or less, and working in an organization for a minimum period of 3 years.
- 5. He/she should obtain a certificate for the Head of the Institute Department that the work was primarily carried out by the applicant. The paper should not have already been published in any scientific journal. However, the authors will be free to publish the paper elsewhere after presentation, provided it is acknowledged that the paper was presented at the Annual meeting ISAR. Only the abstract of the paper will be prepared in the proceedings of the society.
- 6. A member who has won the medal against a particular award would not be eligible for second time, although such a member can be a co-author of a paper for the subsequent award.
- 7. No member can present more than one paper for the award.
- The abstract of not more than 200 words indicating the name of the medal for which it is submitted at the top
 of the paper should be sent to Dr. Ritu Singh, Secretary, Indian Society for Atherosclerosis Research, by email only.
- 9. The paper submitted for the awared will be screened and judged by a panel of three judges.
- 10. The decision of the panel of judges will be final and binding on all concerned.
- 11. The papers so selected for awards will be presented at the Annual Meeting of the Society and 15 minutes will be given to each paper for presentation.
- 12. In case the award is not given to a paper after oral presentation, a certificate of merit would be given.

TRAVEL GRANTS

Five students will be awarded travel agent on the basis of merit of their paper by Dr. S. Biswas, HOD-Biochemistry, Nagpur University. They will be judged during conference presentation.



NominationForm for Election 2009

То						
Department	ary ety of Ahterosclerosis Rese t of Clinical Biochemistry nge Medical College, New I					
	m with to submit my candidatu lerosis Research	ure for the forthcomin	g elections	of the Indian Society		
1	. President Elect					
2	. Vice-President					
3	s. Secretary					
4	. Joint Secretary					
5	5. Treasurer					
6	6. Member of Executive Committee					
7	7. State Representative					
My name h	as been sponsored by					
1		(Proposer)				
2		(Seconder)				
Date Place			Name Designation	Yours Faithfully		
Certified the	at I have paid the member	ship fee of the socie	ty and that	no dues are pending		
			(Verification by Treasurer)			
			Signature	of candidate		



INDIAN SOCIETY FOR ATHEROSLEROSIS RESEARCH Dept. of Biochemistry, Lady Hardinge Medical College, New Delhi -110001

ANNOUNCEMENT

Elections to be held at Mysore ISARCON 2009 Nominations invited for executive council 2010 2011 Last date of receiving Nominations; 15th Nov 2009 To be posted / or scanned and e-mailed to Dr Ritu Singh, Secretary ISAR

CONGRATULATIONS

To Mr Manoj Kumar Barthwal (ISAR LM 265) for winning the IAS fellowship Award 2009

ISARCON 2009

22ND Annual Conference of the Indian Society for Atherosclerosis Research Organizing Secretary Dr B.S.Vishwanath , Professor , Biochemistry

Conference Secretariat ; Department of Biochemistry, University of Mysore,
Manasa Gangotri Campus, Mysore-570006

Dates: expected dates are in 2-3rd week of December Dr Vishwanath will be finalizing the dates He can be contacted on 09845893634, 08212419624 vishmy@yahoo.co.uk

OTHER FORTHCOMING CONFERENCES

XVI International symposia on Atherosclerosis , Sydney, Australia March 25-30 , 2012 , www.isa2012.com

The 78th European Atherosclerosis Society Congress ,Germany ; 20-23 june 2010 eas 2010@kenes.com

61st Annual Cardiological Society of India Conference ,Kochi, Kerala, 3rd to 6th Dec 2009., www.csi2009kochi.org/



ISARCON 2008



